

FACT SHEET FOR NPDES PERMIT WA0039501

SHORE TERMINALS LLC

(formerly Superior Oil Co. Terminal and Time Oil Co.)

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INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System (NPDES) of permits, which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the state of Washington on the basis of Chapter 90.48 Revised Code of Washington (RCW) which defines the Department of Ecology's (Department) authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the state include procedures for issuing permits [Chapter 173-220 Washington Administrative Code (WAC)], water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty (30) days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see [Appendix A--Public Involvement](#) of the fact sheet for more detail on the Public Notice procedures).

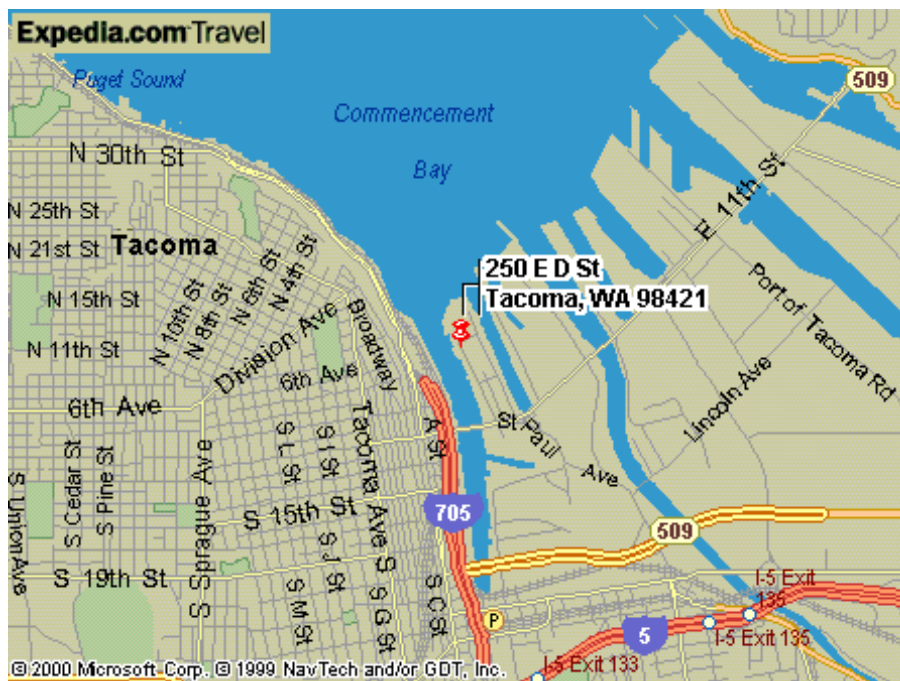
The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Comments and the resultant changes to the permit will be summarized in Appendix D--Response to Comments.

GENERAL INFORMATION	
Applicant:	Bill L. Stowell Jr., Terminal Manager
Facility Name and Address:	Shore Terminals LLC 250 East 'D' Street, Tacoma, WA 98401 (formerly Time Oil Co. and Superior Oil Co.)
Type of Facility:	Petroleum and Chemical Bulk Terminal for Hire
SIC Code:	4226
Discharge Location:	Thea Foss Waterway, Commencement Bay, Tacoma Latitude: 47° 15' 40" N Longitude: 122° 26' 05" W.
Water Body ID No.:	WA-10-0030

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

Shore Terminals LLC is located at the mouth of the Thea Foss Waterway (City Waterway) in the southwest part of Commencement Bay in Tacoma, Pierce County. Shore Terminal is classified as a Petroleum and Chemical Bulk Terminal for Hire, SIC 4226.



HISTORY

A bulk petroleum storage facility was first constructed at this site between 1923 and 1925 by Associated Oil Company. Tidewater Oil Company assumed ownership from 1936 until 1966, when Tidewater transferred ownership to Phillips Petroleum Company. In 1968, Phillips Petroleum Company transferred ownership to Puget Sound Plywood, who leased the facility to McCarty/Northwestern Petroleum Company from 1969 to 1976. Puget Sound Plywood sold the facility to Superior Oil Company in 1976, but McCarty/Northwestern Petroleum Company continued to operate the facility until January 1979, when Gull Industries acquired McCarty/Northwestern Petroleum Company. Superior Oil Company then operated the facility from 1979 until Shore Terminals LLC purchased the facility on October 30, 1999.

INDUSTRIAL PROCESS

Shore Terminals is categorized as a petroleum and chemical bulk terminal for hire, SIC 4226. The facility is located on 5.3 acres and consists of tank farms, marine loading/unloading dock, and two (2) truck loading racks. Total storage capacity is three hundred fifty thousand (350,000) barrels. The majority of product is received by pipeline and shipped by truck. However, some product is off-loaded from barges, and a rail spur can be used for loading or off-loading.

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On a monthly average basis, Shore Terminals averages throughput of approximately 16 million gallons of petroleum products. Because this terminal is for hire, a wide range of chemical products can be handled. Normal products include gasoline, diesel, ethanol, aviation gasoline, and gasoline additives.

Shore Terminals is open seven (7) days per week, twenty-four (24) hours per day. Operators are on duty twenty-four (24) hours per day, Monday through Friday, and weekend coverage as needed for receiving product.

TREATMENT SYSTEM

Shore's treatment system is designed to treat stormwater contaminated with soluble and insoluble petroleum hydrocarbons. Stormwater is generated as rain falls on the lined tank farm (~3 acres) and paved general yard area (~1 acre). This stormwater is collected in catch basins, sumps, and trenches, which then empty into a main collection sump. The stormwater is then pumped to two surge tanks for flow equalization. Any floating free petroleum product is skimmed off to the slop tank. The stormwater is then pumped to the 10,000 gallon oil/water separator, from which any further residual product is removed to the slop tank. The stormwater then flows to the below-grade baffled sump, where the flow is equalized and pretreated for prevention of biofouling. The stormwater is then pumped to granular activated carbon adsorption system, which removes dissolved petroleum hydrocarbons. From here, the treated effluent is discharged to the outfall into the Thea Foss Waterway.

Chemicals used in the stormwater treatment system include granular activated carbon for organics adsorption (~2-3 tons per year) and sodium carbonate for pH adjustment (~500 pounds per year).

Sanitary wastewater is sent to the City of Tacoma municipal treatment facilities. Process wastewater from tank cleaning, etc. that is contaminated with petroleum hydrocarbons is disposed of by a recycler. No process wastewater is treated onsite or discharged into a receiving water.

DISCHARGE OUTFALL

Treated stormwater is intermittently discharged along the east bank of the Thea Foss Waterway through a straight pipe without diffuser. The discharge point is roughly 140 feet north of the southwest corner of the property, at an elevation of 11 feet MLLW.

PERMIT STATUS

Shore Terminals is applying for renewal of their current NPDES discharge permit. The previous (current) permit for this facility was issued on September 30, 1993, and expired on October 6, 1998. The permit contained interim discharge limitations for Outfall 001 (S1.A), which were applicable until upgrades to the treatment system were completed. Time Oil reported that the upgrades were completed and operational as of April 1995.

The permit also contained internal discharge point limitations for treated groundwater (Outfall 002), prior to mixing with Outfall 001. Although permitted in the 1993 permit, this wastewater was never discharged through Outfall 001. This system continues to operate, and discharges to the City of Tacoma sewer system.

For Outfall 001, the permit placed effluent limitations on oil and grease, total suspended solids (TSS), pH, benzene, ethylbenzene, total petroleum hydrocarbons (gasoline), and total petroleum hydrocarbons (diesel), as shown in Table 1.

Table 1: Previous (current) permit effluent limitations- Outfall 001

Parameters	Units	Monthly Average	Daily Maximum
Oil and Grease (O&G)	Milligrams per liter (mg/L)	10	15
	No visible sheen		
Total Suspended Solids (TSS)	mg/L	30	45
Benzene	mg/L	-	0.040
Toluene	mg/L	report	report
Ethylbenzene	mg/L	-	0.1
Xylenes	mg/L	report	report
Total Petroleum Hydrocarbons-Gasoline (TPH-G)	mg/L	-	1
Total Petroleum Hydrocarbons-Diesel (TPH-D)	mg/L	-	10
pH	Standard Units (SU)	Not outside the range of 6 to 9	

An application for permit renewal was submitted to the Department on February 5, 1998, and accepted by the Department on August 18, 1998.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection without sampling on December 16, 1999.

Since the installation of the treatment process upgrades in April 1995, the Permittee has remained in substantial compliance based on Discharge Monitoring Reports (DMRs) submitted to the Department and inspections conducted by the Department. From May 1995, through 1999, this facility had low pH (5.15-5.86) reported in October 1995, 1996, January 1996, and April 1998. Also, TSS limits for daily maximum and monthly average were exceeded in April 1996. The Department determined that no enforcement actions were needed.

WASTEWATER CHARACTERIZATION

The proposed wastewater discharge is characterized for the following regulated parameters (from application and 1997 through 1999 DMRs):

Table 2: Wastewater Characterization

Parameter	Concentration (maximum / average)
Discharge Flowrate	137,306/32,044 gallons/day
TSS	16/7.6 mg/L
pH	6.0 – 8.1 standard units (average 6.9)
Oil & Grease	0.70/0.53 mg/L
TPH-G	0.37/0.26 mg/L
TPH-D	0.38/0.26 mg/L
Benzene	0.003/0.003 mg/L

Parameter	Concentration (maximum / average)
Ethylbenzene	0.003/0.003 mg/L
Toluene	0.003/0.003 mg/L
Xylenes	0.003/0.003 mg/L
WTHP-D	2.4/0.32 mg/L
WTHP-G	0.37/0.25 mg/L

SEPA COMPLIANCE

This permit renewal application has no SEPA compliance issues.

PROPOSED PERMIT LIMITATIONS

Federal and state regulations require that effluent limitations set forth in a NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the state of Washington were determined and included in this permit. The Department does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Effluent limits are not always developed for pollutants that may be in the discharge but not reported as present in the application. In those circumstances the permit does not authorize discharge of the non-reported pollutants. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation. Effluent discharge conditions may change from the conditions reported in the permit application. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department. The Permittee may be in violation of the permit until the permit is modified to reflect additional discharge of pollutants.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Technology-based limitations are set by regulation in the federal effluent guidelines or on a case-by-case basis using Best Professional Judgment (BPJ) when no effluent guidelines exist for an industrial category. Technology-based limits represent the best treatment a facility can achieve consistent with the economic means of the industry as a whole (in the case of effluent guidelines) or of the specific facility being permitted (in the case of BPJ). Technology-based effluent limits are process control parameters or numbers which indicate that a process, which in this case is wastewater treatment, is not functioning properly.

EFFLUENT LIMITATIONS

The oil & grease limits are consistent with the Department's policy for Direct Discharge, which is based on the proven performance of gravity oil/water separators.

Limits for pH are standard for most NPDES permits and are based on simple pollution prevention and neutralization techniques.

The limit for BTEX is derived from demonstrated performance of bulk petroleum tank farms in minimizing discharge of petroleum-based compounds through stormwater pollution prevention techniques and use of gravity oil/water separators. BTEX is the sum of the concentrations of detected levels of benzene, toluene, ethylbenzene and xylenes.

The limits for benzene and TSS are retained from the previous permit. These limits are technology-based. The specific limit for ethylbenzene- 100 ug/L- is dropped because the new BTEX limit equals this individual limit of 100 ug/L, and thus is more stringent.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL).

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the state of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in a receiving water while remaining protective of aquatic life. Numerical criteria set forth in the Water Quality Standards are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA 1992). These criteria are designed to protect humans from cancer and other disease, and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDEGRADATION

The state of Washington's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. More information on the state Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

The Department has reviewed existing records and is unable to determine if ambient water quality is either higher or lower than the designated classification criteria given in Chapter 173-201A WAC; therefore, the Department will use the designated classification criteria for this water body in the proposed permit. The discharges authorized by this proposed permit should not cause a loss of beneficial uses.

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic water body uses.

MIXING ZONES

The Water Quality Standards allow the Department to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known, available, and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100.

The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

DESCRIPTION OF THE RECEIVING WATER

Shore Terminal discharges to the Thea Foss Waterway which is designated as a Class C receiving water in the vicinity of the outfall. The Waterway is an arm of Commencement Bay, which is a marine estuary. Other nearby point source outfalls include TOSCO 76 Tacoma Terminal and TOSCO NW Tacoma Terminal. Characteristic uses include the following:

Class C (Fair): water supply (industrial); stock watering; fish migration; secondary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation. Water quality of this class shall meet or exceed the requirements of selected and essential uses.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA 1992).

CONSIDERATION OF SURFACE WATER QUALITY-BASED LIMITS FOR NUMERIC CRITERIA

A determination of reasonable potential resulted in a finding of no reasonable potential. All applicable data indicates that there is no reasonable potential for this discharge to cause a violation of water quality standards. This determination assumes that the Permittee meets the other effluent limits of this permit.

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HUMAN HEALTH

Washington's water quality standards now include 91 numeric health-based criteria that must be considered in NPDES permits. These criteria were promulgated for the state by the U.S. EPA in its National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992).

The Department has determined that the discharge will not cause or contribute to an exceedance of the human health criteria so long as compliance with the technology-based limits of the permit are maintained.

The limit for benzene, 0.040 mg/L, will be retained, to assure compliance with the NTR standard. However, the individual limit for ethylbenzene, 0.100 mg/L, will be dropped, since 1) the new BTEX limit is the same as the existing ethylbenzene limit, but includes the sum of benzene, toluene, ethylbenzene, and xylenes and therefore is more restrictive, and 2) the NTR standard for ethylbenzene is 29 mg/L, and therefore the BTEX limit is much more restrictive.

WHOLE EFFLUENT TOXICITY

The Water Quality Standards for Surface Waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the wastewater in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing.

Toxicity caused by unidentified pollutants is not expected in the effluent from this discharge as determined by the screening criteria given in Chapter 173-205 WAC. Therefore, no whole effluent toxicity testing is required in this permit. The Department may require effluent toxicity testing in the future if it receives information that toxicity may be present in this effluent.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

This Permittee has no discharge to ground and therefore no limitations are required based on potential effects to ground water.

**COMPARISON OF PROPOSED EFFLUENT LIMITS WITH THE EXISTING PERMIT ISSUED
SEPTEMBER 30, 1993**

Outfall 001:

Parameter	Existing Permit (Monthly avg./Daily max.)	Proposed Permit (Monthly avg./Daily max.)
Oil & Grease, mg/L	10/15	10/15
Oil & Grease	No visible sheen	No visible sheen
TSS, mg/L	30/45	30/45
Benzene, µg/L	NA/40	NA/40
Toluene	Report	*
Ethylbenzene, µg/L	NA/100	*
Xylene	Report	*
Total Petroleum Hydrocarbon Gasoline (TPH-G), mg/L	NA/1.0	NA/1.0
Total Petroleum Hydrocarbon Diesel (TPH-D), mg/L	NA/10	NA/10
BTEX**, µg/L	NA/NA	NA/100
pH, standard units	6-9	6-9

* - replaced by BTEX limit.

** - sum of concentrations of benzene, toluene, ethylbenzene, and xylenes.

The proposed BTEX limit of 100 µg/L (parts per billion) is more stringent than the sum of the current limits of benzene and ethylbenzene (40+100=140 µg/L).

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

The monitoring schedule is detailed in the proposed permit under Condition S.2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

LAB ACCREDITATION

With the exception of certain parameters, the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories*. Shore Terminal contracts with Spectra Laboratories in Tacoma, whose services are fully accredited.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-220-210).

NON-ROUTINE AND UNANTICIPATED DISCHARGES

Occasionally, this facility may generate wastewater, which is not characterized in their permit application because it is not a routine discharge, and was not anticipated at the time of application. These typically are waters used to pressure test storage tanks or fire water systems or leaks from drinking water systems. These are typically clean wastewaters, but may be contaminated with pollutants. The permit contains an authorization for non-routine and unanticipated discharges. The permit requires a characterization of these wastewaters for pollutants and examination of the opportunities for reuse. Depending on the nature and extent of pollutants in this wastewater and opportunities for reuse, the Department may authorize a direct discharge via the stormwater outfall for clean water, require the wastewater to be placed through the stormwater treatment process, or require the water to be reused.

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under Section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department.

SOLID WASTE

The discharge of leachate from solid waste is not authorized by this permit.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control its production in order to maintain compliance with its permit. Condition G10 prohibits the reintroduction of removed substances back into the effluent. Condition G11 requires the Permittee to provide any information that the Department may request to establish cause for permit changes or status of compliance and to provide any records required to be kept by the Permittee. Condition G12 incorporates by reference all other requirements of 40 CFR 122.41 and 122.42. Condition G13 notifies the Permittee that additional monitoring requirements may be established by the Department. Condition G14 requires the payment of permit fees. Condition G15 describes the penalties for violating permit conditions. Condition G16 defines an upset of the treatment system and explains the role of an upset in defense of permit violation. Condition G17 states that the permit does not convey a property right. Condition G18 states the duty of the Permittee to comply with the permit and potential consequences of failure to comply. Condition G19 requires the Permittee to comply with the toxic pollutant requirements of the CWA. Condition G20 states the penalties for tampering with test methods or devices used to satisfy monitoring requirements of this permit. Condition G21 explains the requirement to report changes in operation of the facility. Condition G22 requires reporting of any planned changes to the facility that may result in noncompliance with the permit. G23 requires prompt submittal of information that contradicts previously reported information. G24 requires that existing manufacturing, commercial, mining, or silviculture must notify the Department when they trigger specific thresholds of discharge for certain toxic pollutants. G25 establishes the grace period for submittals required in a schedule of compliance.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary to meet Water Quality Standards for Surface Waters, Sediment Quality Standards, or Water Quality Standards for Ground Waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this proposed permit be issued for five (5) years.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.
1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.
1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.
1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.
- Washington State Department of Ecology.
1994. Permit Writer's Manual. Publication Number 92-109

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations, which are described in the rest of this fact sheet.

Public notice of application was published on August 30, 1998, September 5, 1999 and September 12, 1999, in *The Tacoma News Tribune* to inform the public that an application had been submitted, and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on November 5, 2000, in *The Tacoma News Tribune* to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Southwest Regional Office
PO Box 47775
Olympia, WA 98504-7775

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (360) 407-6286, or by writing to the address listed above.

This permit and fact sheet were written by Don Reif.

APPENDIX B--GLOSSARY

Acute Toxicity--The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

AKART-- An acronym for "all known, available, and reasonable methods of treatment".

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation --The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Chlorine--Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity--The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring --Uninterrupted, unless otherwise noted in the permit.

Critical Condition--The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Dilution Factor--A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction e.g., a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Engineering Report--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Major Facility--A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minor Facility--A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone--An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the Federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the State of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both State and Federal laws.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Responsible Corporate Officer-- A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Upset--An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C--TECHNICAL CALCULATIONS

Several of the Excel[®] spreadsheet tools used to evaluate a discharger's ability to meet Washington State water quality standards can be found on the Department's homepage at <http://www.ecy.wa.gov/programs/eap/pwspread/pwspread.html>.

APPENDIX D--RESPONSE TO COMMENTS

Ecology received one comment letter during the public comment period of draft permit WA0039501 for Shore Terminals. Citizens For A Healthy Bay (CHB), signed by Karen Dinicola, is a non-profit environmental organization that focuses on environmental cleanup, restoration, and protection of Commencement Bay in Tacoma. The CHB comments were prefaced, in part, as concerns with protecting recent cleanup efforts in the Thea Foss Waterway of Commencement Bay.

The CHB comments were numbered by issue. The issues are quoted in full, and then Ecology's responses are listed.

1) S.1: This draft permit does not differ significantly from the previous permit. Our review of the DMRs indicates that permit limits are much higher than the facility's discharges as well as the wastewater characterization. We therefore suggest that Ecology strengthen the permit by lowering the permitted discharge concentrations. Specifically, we request that the average monthly and maximum daily limits for TSS be lowered to 15 and 30 mg/L; those for oil and grease be lowered to 5 and 10 mg/L; and the maximum limits for benzene and BTEX be lowered to 20 and 50 ug/L. These limits are already being easily achieved by the permittee. It is clearly the intent of the Clean Water Act and EPA that Ecology will continue to reduce permitted discharges of pollutants to our public waters.

Ecology concurs that many requirements in Shore Terminals' current permit are retained in the proposed draft; that the facility has generally performed well below its discharge limits during the course of the current permit cycle; and that Ecology could reduce the limits. However, Ecology will retain the proposed limits for the following reasons.

- ◆ Shore Terminals' discharge is generally quite benign because they have done a good job of operating the facility. Best management practices are employed and spills to the containment area (primarily at the loading rack to commercial truck carriers) have been minimized.
- ◆ They have installed and maintained a well operating stormwater treatment system, considering their low pollutant loadings.
- ◆ This round of permits for these bulk facilities were written using a new model permit. One of the purposes of the model was to help get the facilities onto a level playing field. Even so, some facilities have stricter limits based on proven ability.
- ◆ This draft permit has added BTEX limits and a new section with fourteen required BMPs. These additions are expected to result in a reduction of pollutants, even though existing limits were not lowered in this permit round.

With regard to lowered limits, Ecology expects to re-evaluate the limits for bulk petroleum storage facilities before the next permitting cycle. Lowered limits at the time will be a serious consideration.

2) S.1: Also contrary to the requirements of the Clean Water Act, this draft permit fails to set mass loading limits on discharges of pollutants either explicitly or by establishing a flow limit for outfall 001. Please include an average flow limit of 75,000 GPD or lower in this permit.

This permit allows Shore Terminals to discharge only treated stormwater from certain areas of its facility -- areas that might include contamination by petroleum products. For most process-related wastewater, mass limits, which require flow monitoring to calculate, are a valuable tool to control the discharge and assure the greatest reduction of pollutants. This is not the case with stormwater. Shore Terminals needs

to treat whatever flows nature gives it. Thus, Ecology is primarily concerned with the concentration of pollutants discharged. A flow limit would serve no purpose.

3) S.1: We support Ecology's decision to require the facility to continue to monitor benzene concentrations and to substitute a total BTEX measurement for the additional petroleum compounds. Again, we suggest that the concentration limits can and should be lowered.

See Ecology response to issue #1.

4) S.2.A: The facility frequently reports pH close to the lower permitted range limit of 6 units. The facility had numerous violations of this parameter during the previous permit cycle, but the draft permit requires measurement of pH only on weekdays. We request that pH be measured every day the facility is in operation, which includes Saturday and Sunday. Under no circumstances should the facility be excused from weekend monitoring of this parameter.

Ecology believes the low pH values are consistent with the pH of normal rainfall, and is probably not influenced by contamination on Shore Terminals' property. This rainfall should be poorly buffered, and thus should be raised to a neutral pH nearly instantly upon contact with the highly buffered, saline receiving water. No degradation of the receiving water would be expected. Since Shore Terminals does not treat for pH, the pH of discharged stormwater should remain stable on the weekends. The monitoring frequency for pH will be retained as proposed.

5) S.2.A: A target date should be set for the Priority Pollutants Metals scan in the Effluent Monitoring Schedule. We ask that this sampling take place as soon as possible so that the information can be considered with regard to source control for Superfund cleanup of the Foss Waterway.

Ecology will add language to require this analysis to be performed in the first year of the permit.

6) S.6.7: We are concerned that all appropriate BMP's to prevent accidental discharges to surface water are not being implemented at this facility. We ask that all barges be pre-boomed during off-loading. Barges, which are known to be at greater risk than tankers for accidental spills, arrive at Shore Terminals more frequently since the failure of the Olympic Pipeline in Bellingham in June 1999. We have noted that other petroleum terminals in Commencement Bay consistently pre-deploy booms to contain possible spills and we would like to see Shore Terminals begin to implement this practice as well.

Shore Terminals has an approved Oil Spill Contingency Plan. This plan requires the best BMPs for Shore, considering its specific needs. According to Shore Terminals personnel, an emergency response boat is put in the water before a barge arrives, and is on standby during the offloading procedure. Shore has a thousand-foot reel of boom that is ready to be deployed, if needed. Much of Shore Terminals' barge loads consist of light product, while routine boom deployment is used by some terminals during offloading of heavy product, such as crude oil and bunker fuel. Ecology's spill response unit has reviewed and approved this procedure for Shore Terminals.

Ecology definitely recommends the pre-deployment of boom when and where it is feasible.

7) S.6.10 and S.6.11: We suggest that language be added requiring that the facility keep a record of these inspections on file for Department review.

FACT SHEET FOR NPDES PERMIT WA0039501
SHORE TERMINALS LLC

Shore Terminals should maintain some mechanism to indicate that these inspections occurred -- either a written record specifically, or a protocol with documentation that the required procedures were followed.

8) S.6.12: *We suggest adding the following language: "All waste material shall be handled and disposed of in such a manner as to prevent its entry into ground or surface waters."*

This language clearly states the intent of the boilerplate language in S.6.12, and will be added. In addition, this verbiage will be recommended to Ecology's permit review committee.

9) *On April 7, 1997, Ecology informed the facility (then Time Oil) that their request to use whole effluent testing in lieu of the sediment chemistry studies required in the current permit. This modification of the permit requirements should not have occurred without public notification and opportunity to comment. Although the results of the facility's toxicity studies appear to indicate low toxicity of the effluent, baseline information about sediment quality at the outfall would be helpful in evaluating the facility's long-term effect on the Foss Waterway. Periodic testing of the sediments will again be appropriate once Superfund Cleanup of the waterway is completed.*

Section S6.A., Sediment Baseline Study Plan, describes a process whereby the permittee could request a modified sampling plan. Time Oil took this option, and requested whole effluent toxicity testing in lieu of sediment chemistry studies. Due to very low suspended solids and other considerations, including the high level of treatment by the new treatment system, Ecology granted the approval. Since this contingency was already built into the permit structure, a modification was not necessary, and thus public notice was not required.

10) *During our review of this facility's permit file at Ecology, no report was available for the inspection that occurred on December 16, 1999. We ask that the permit manager locate and review this report and ensure that any lapses in the facility's performance are noted in the fact sheet on p. 4 and substantially addressed in the permit issuance.*

The draft fact sheet, page 4, states that the facility received an inspection on December 16, 1999. However, the visit was not a compliance inspection. Ecology personnel visited the facility prior to drafting the permit, primarily for the purpose of familiarization with the facility. A report was not written. If it had been a compliance inspection, a report should have been written. Ecology apologizes for this misleading information.

During the visit on December 16, 1999, no determination of compliance was made, and no indication of non-compliance was observed.